

Technical Data Sheet



Polyflam RPC 40400

Polycarbonate
LyondellBasell Industries
Engineering Plastics

Product Description

Flame retardant PC; halogen free according to DIN VDE 0472 part 815

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Flame Retardant • Halogen Free		
UL File Number	• E86615		
Processing Method	• Injection Molding		

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.18 g/cm ³	1.18 g/cm ³	ISO 1183/A
Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)	25 cm ³ /10min	25 cm ³ /10min	ISO 1133
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	348000 psi	2400 MPa	ISO 527-1/1A/1
Tensile Stress (Yield)	8700 psi	60.0 MPa	ISO 527-2/1A/50
Tensile Strain (Yield)	5.0 %	5.0 %	ISO 527-2/1A/50
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F (-30°C)	9.5 ft·lb/in ²	20 kJ/m ²	
73°F (23°C)	29 ft·lb/in ²	60 kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F (-30°C)	No Break	No Break	
73°F (23°C)	No Break	No Break	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			
66 psi (0.45 MPa), Unannealed	217 °F	103 °C	ISO 75-2/Bf
264 psi (1.8 MPa), Unannealed	203 °F	95.0 °C	ISO 75-2/Af
Vicat Softening Temperature			
--	230 °F	110 °C	ISO 306/B50
--	239 °F	115 °C	ISO 306/A50
Ball Pressure Test (221°F (105°C))	Pass	Pass	IEC 60695-10-2
RTI Elec			UL 746B
0.06 in (1.5 mm)	176 °F	80.0 °C	
0.12 in (3.0 mm)	176 °F	80.0 °C	
RTI Imp			UL 746B
0.06 in (1.5 mm)	176 °F	80.0 °C	
0.12 in (3.0 mm)	176 °F	80.0 °C	
RTI Str			UL 746B
0.06 in (1.5 mm)	176 °F	80.0 °C	
0.12 in (3.0 mm)	176 °F	80.0 °C	

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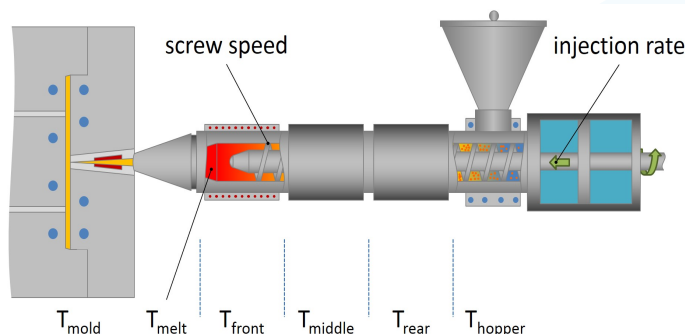
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Surface Resistivity	> 1.0E+15 ohms	> 1.0E+15 ohms	IEC 60093
Volume Resistivity	> 1.0E+13 ohms·m	> 1.0E+13 ohms·m	IEC 62631-3-1
Comparative Tracking Index	225 V	225 V	IEC 60112
High Amp Arc Ignition (HAI)			UL 746A
0.06 in (1.5 mm)	PLC 0	PLC 0	
0.12 in (3.0 mm)	PLC 0	PLC 0	
Hot-wire Ignition (HWI)			UL 746A
0.06 in (1.5 mm)	PLC 3	PLC 3	
0.12 in (3.0 mm)	PLC 2	PLC 2	
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Burning Rate			
0.0787 in (2.00 mm), Self-Extinguishing	0.0 in/min	0.0 mm/min	FMVSS 302
0.0787 in (2.00 mm), Self-Extinguishing	0.0 in/min	0.0 mm/min	ISO 3795
Flame Rating			UL 94
0.06 in (1.5 mm)	V-0	V-0	
0.12 in (3.0 mm)	V-0	V-0	
0.14 in (3.5 mm)	V-0	V-0	
	5VA	5VA	
Glow Wire Flammability Index			IEC 60695-2-12
0.06 in (1.5 mm)	1760 °F	960 °C	
0.12 in (3.0 mm)	1760 °F	960 °C	
Glow Wire Ignition Temperature			IEC 60695-2-13
0.06 in (1.5 mm)	1560 °F	850 °C	
0.12 in (3.0 mm)	1430 °F	775 °C	
Oxygen Index	33 %	33 %	ASTM D2863

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Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	212 to 248 °F	100 to 120 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Suggested Max Moisture	0.02 %	0.02 %
Processing (Melt) Temp	500 to 518 °F	260 to 270 °C
Mold Temperature	122 to 176 °F	50 to 80 °C
Injection Rate	Moderate-Fast	Moderate-Fast
Back Pressure	725 to 1450 psi	5.00 to 10.0 MPa
Screw Speed	< 591 in/min	< 15 m/min

Notes

These are typical property values not to be construed as specification limits.

Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

Product Storage and Handling

- Product should be stored in dry conditions at temperatures below 50°C and protected from UV-light
- Improper storage may bring damage to the packaging and can negatively affects on the quality of this product
- Keep material completely dry for good processing

Company Information

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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